

Amendment to the Claims

Claim 1 (Currently amended): A method of producing an immunogenic composition comprising

transforming a plant with a nucleic acid construct that expresses a recombinant mammalian viral immunogen in a plant,

selecting those plants expressing said recombinant viral immunogen at a level such that upon oral administration of a composition comprising a plant-expressed recombinant viral

immunogen to an animal, an immunogenic response to said viral immunogen is elicited so that the animal is protected against viral challenge, and

producing from said plants said immunogenic composition.

Claim 2 (Original): The method of claim 1, wherein said immunogen is capable of generating an immunogenic response when the immunogen interacts with a mucosal membrane.

Claim 3 (Original): The method of claim 1, wherein said immunogen is from a transmissible gastroenteritis virus.

Claim 4 (Previously presented): The method of claim 1 further comprising:
selecting edible plant tissue expressing said immunogen at a level such that a composition comprising said immunogen induces an immunogenic response upon administration to an animal, wherein said level of immunogen correlates with expression levels of said immunogen in said tissue.

Claim 5 (Original): The method of claim 1, wherein said plant is a dicotyledonous plant.

Claim 6 (Currently amended): The method of claim 1 further comprising the step of:
introducing into said plant a nucleotide sequence designed for expression of said immunogen
comprising one of more of the following features:

a promoter sequence which preferentially targets expression to edible tissues of a plant;
a 5' untranslated leader sequence; and
an enhancer sequence.

Claim 7 (Original): The method of claim 1 wherein said plant is a monocot plant.

Claim 8 (Currently amended): A method of producing an immunogenic composition
comprising:

introducing into a plant a nucleic acid construct which causes expression of a recombinant
mammalian viral immunogen preferentially in the edible tissues of said plant, and
selecting those plants with expression in said tissue at a level such that upon oral administration
of said tissue to an animal, an immunogenic response to said viral immunogen is
observed to protect said animal against a viral challenge, to form thereby forming said
immunogenic composition.

Claim 9 (Currently amended): A method of producing an immunogenic composition
comprising obtaining a nucleic acid construct, said construct comprising:

a nucleotide sequence which encodes a recombinant mammalian viral immunogen and one or more of the following:

a promoter sequence which preferentially targets expression to edible tissues of a plant;

a 5' untranslated leader sequence;

an enhancer sequence;

transforming a plant cell with said sequence so that expression of the recombinant viral

immunogen is at a level such that upon oral administration of the plant an immunogenic

response to said immunogen is observed to protect against a viral challenge, and

collecting plants with said expression level to form said immunogenic composition.

Claim 10 (Previously presented): The method of claim 1, wherein said plant is a plant edible by an animal.

Claim 11 (Withdrawn): A method of eliciting an immunogenic response in an animal, the method comprising transforming a plant with a nucleotide construct expressing a recombinant viral immunogen in a plant,

selecting those plants expressing said recombinant viral immunogen at a level such that upon oral

administration of a composition comprising said plant-expressed recombinant viral

immunogen to an animal, an immunogenic response to said viral immunogen is elicited,

and

contacting said composition with said animal to elicit an immunogenic response in said animal.

Claim 12 (Withdrawn): The method of claim 11 wherein said plant is an edible plant.

Claim 13 (Withdrawn): The method of claim 11 wherein said plant is a monocotyledonous plant.

Claim 14 (Withdrawn): The method of claim 11 wherein tissue of said plant is orally administered to said animal.

Claim 15 (New): The method of claim 1 wherein said plant is not a banana plant.

Claim 16 (New): The method of claim 1 wherein the step of transforming said plant is without wounding.